



Deputy Under Secretary of Defense

Advanced Systems & Concepts



SUCCESS STORY

Pentagon to Install DPA Title III Energy Efficient, Light Emitting Diodes



Pentagon area before...



...and after LED lighting.



Device pictured above.

The Pentagon is addressing both the Energy Independence and Security Act of 2007, and the President's challenge to be an environmental leader and increase efficiency in federal buildings in a very simple, yet innovative way: they are changing the lights.

The Department of Defense, Washington Head Quarters Services, Pentagon Renovation (PenRen) Office is demonstrating leadership with the Pentagon's Wedge 5 renovation by installing solid state Light Emitting Diode (LED) fixtures. AS&C's Defense Production Act (DPA) Title III program is providing the fixtures through a unique partnership.

LED lights were tested in the Pentagon in 2008 to meter fixtures and compare results to fluorescent technology. LED lights demonstrated a 22 percent reduction in energy consumption and improved light quality. A business case analysis conducted by PenRen office showed payback in less than four years, lifecycle cost savings of approximately \$3 million, and estimated reduction of 140 tons CO₂ emissions annually. For DoD, these savings translate to increased allocation of resources to warfighters.

The DPA Title III program and industry partner, Cree, Inc., of Durham, N.C., are executing an effort to improve the production and lower cost of Silicon Carbide wafers for Monolithic Microwave Integrated Circuit devices used in applications critical to defense systems. These same wafers also serve as the foundation for production of Cree's energy efficient LEDs. LED lights achieve longer life, higher light output, and greater efficiency in a smaller footprint than incandescent or fluorescent lights. They accomplish this without some disposal concerns that accompany fluorescent lights.

For more information on the DPA Title III program, visit: www.acq.osd.mil/ott/dpatitle3/.